

# Charging Systems

## CHARGING SYSTEMS TROUBLE SHOOTING

CONDITION & POSSIBLE CAUSE	CONDITION & POSSIBLE CAUSE
<p><b>Car Will Not Start</b></p> <ul style="list-style-type: none"> <li>• Dead battery.</li> <li>• Loose or corroded battery connections.</li> <li>• Ignition switch malfunction.</li> </ul> <p><b>Generator Light Stays ON With Engine Running</b></p> <ul style="list-style-type: none"> <li>• Loose or worn drive belt.</li> <li>• Loose generator wiring connections.</li> <li>• Short in generator light wiring.</li> <li>• Defective generator stator or diodes.</li> <li>• Defective regulator.</li> </ul> <p><b>Generator Light Stays OFF With Ignition ON</b></p> <ul style="list-style-type: none"> <li>• Blown fuse.</li> <li>• Defective generator.</li> <li>• Defective indicator light bulb.</li> <li>• Defective indicator light bulb socket.</li> </ul> <p><b>Generator Light Stays ON With Ignition OFF</b></p> <ul style="list-style-type: none"> <li>• Short in generator wiring.</li> <li>• Defective rectifier bridge.</li> </ul> <p><b>Lights or Fuses Burn Out Frequently</b></p> <ul style="list-style-type: none"> <li>• Defective generator wiring.</li> <li>• Defective regulator.</li> <li>• Defective battery.</li> </ul> <p><b>Generator Light Flickers While Vehicle is Being Driven</b></p> <ul style="list-style-type: none"> <li>• Loose or worn generator belt.</li> <li>• Loose or improper wiring connections.</li> <li>• Defective generator.</li> <li>• Defective regulator.</li> </ul> <p><b>Ammeter Gauge Shows Discharge</b></p> <ul style="list-style-type: none"> <li>• Loose or worn drive belt.</li> <li>• Defective wiring.</li> <li>• Defective generator or regulator.</li> <li>• Defective ammeter, or improper ammeter wiring connections.</li> <li>• Add-on electrical accessories exceeding generator capacity.</li> </ul>	<p><b>Noisy Generator</b></p> <ul style="list-style-type: none"> <li>• Loose or worn generator drive belt.</li> <li>• Loose drive pulley.</li> <li>• Loose mounting bolts.</li> <li>• Worn or dirty bearings.</li> <li>• Defective diodes or stator.</li> <li>• Bent pulley flanges.</li> <li>• Interference between rotor fan and stator leads.</li> <li>• Rotor fan or rotor damaged.</li> <li>• Rectifiers shorted open.</li> <li>• Open, grounded, or shorted rectifier wiring.</li> <li>• Defective regulator.</li> </ul> <p><b>Battery Does Not Stay Charged</b></p> <ul style="list-style-type: none"> <li>• Loose or worn drive belt.</li> <li>• Loose or corroded battery connections.</li> <li>• Loose generator connections.</li> <li>• Defective generator or battery.</li> <li>• Electrical accessories left ON.</li> <li>• Defective generator stator or diodes.</li> <li>• Add-on electrical accessories exceeding generator capacity.</li> <li>• Low speed driving of short duration, insufficient to charge battery.</li> </ul> <p><b>Battery Overcharged - Uses Too Much Water</b></p> <ul style="list-style-type: none"> <li>• Defective battery.</li> <li>• Defective generator.</li> <li>• Defective regulator caused by shorted field windings.</li> <li>• Battery overheated.</li> <li>• Excessive generator voltage.</li> <li>• Low speed driving of short duration.</li> </ul> <p><b>Generator Current Output Low (with Excessive Charging)</b></p> <ul style="list-style-type: none"> <li>• Grounded generator field wire, field terminal, or connections.</li> <li>• Generator field internally grounded.</li> <li>• Regulator sensing circuit open.</li> </ul> <p><b>Generator Current Output Low (with Unsteady or Low Charging)</b></p> <ul style="list-style-type: none"> <li>• Corroded or shorted cables.</li> <li>• High resistance across fusible link.</li> </ul>